



Received: 14-07-2023
Accepted: 24-08-2023

ISSN: 2583-049X

Factors Affecting the Application of Strategic Management Accounting Techniques: A Case Study of Vietnamese enterprises

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Abstract

In a modern business environment, to improve competitiveness, enterprises must be able to collect and process effective information in response to market fluctuations, and increase operational performance. Strategic management accounting (SMA) provides managers with a framework of technical groups that help businesses plan, control, and evaluate performance. Many businesses around the world operating in different fields have applied strategic management accounting. Vietnamese enterprises need to apply SMA techniques in a highly competitive environment. However, due to many reasons, the use of SMA in Vietnamese enterprises is still low. This greatly affects the performance of businesses. In order to improve management

efficiency and help businesses stand firm in a competitive economy, managers need to be equipped with modern management knowledge with the support of accounting information system management in general, and SMA in particular to provide appropriate and timely information to serve decision-making administrators. This study aims to clarify the theory of economic and technical quality in relation to the performance of enterprises, which is an essential source of information for manufacturing enterprises to design and apply with appropriate techniques to improve the operational performance of manufacturing enterprises in a modern competitive environment.

Keywords: Factors, Strategic Management Accounting, Strategic Management Accounting Techniques, Vietnamese Enterprises

1. Introduction

Global competitive pressure is increasing which also increases challenges for managers and management accounting. Therefore, it is necessary to adjust to satisfy all the arisen demands and changes of administration. Management Accounting mostly focuses on apply concerns inside businesses and providing financial information. Management accounting in general and SMA in particular have a key role in providing information and governing the production and business activities of enterprises. This is an important basis for managers to make short-term and long-term decisions to ensure sustainable development in the market economy.

Meanwhile, modern techniques of Management accounting provide both financial and non-financial information that especially concentrate on forming and deploying strategies. In the last 1800s, despite being newly applied, Strategic Management Accounting Techniques (SMAT) was highly appreciated in term of its role in the management process during the period of economic globalization. At that time, scholars only appreciated and predicted that SMAT would have advantages in management tasks in the following years, then carried out various research to investigate the real situation of applying SMAT. According to results in different nations, applying SMAT in reality was still limited compared to the previous predictions. Therefore, an increase was witnessed in the number of research which aimed to find out negative influences on applying SMAT in enterprises.

In Viet Nam, although different tools of SMA were taken into education of international accounting career and accounting training programs, there is little research about quantitative of SMAT adoption level, or effect factors on applying SMAT in businesses.

The main purpose of this article is to evaluate the application of SMAT and level of impact of different factors (business characteristics, organizational structure, business strategies, market orientation, techniques of information technology) on applying SMAT in enterprises.

2. Literature review

Strategic management accounting

SMA was first introduced by Simmonds in 1981, the basis for which he introduced this concept comes from Porter's Strategic Framework (1980), which provides and analyzes management accounting data of enterprises and competitors, helping businesses develop and monitor business strategies.

Techniques of Strategic Management Accounting Techniques (SMAT)

Strategies Management Accounting Techniques (SMAT) is applied to collect, process, analyze and provide data for strategy planners to make decision and perform monitoring. The objectives of SMAT must contribute to strategic management of organizations and enterprises. On the contrary of Communication Management Accounting which mostly provides and processes insider data, SMAT focuses on external information and further targets with the multidimensionality that access both non-financial and financial performance measure. Therefore, SMAT can provide and process strategic data including customers, competitors, market and external environment which allows businesses to create competitive advantages and improve efficiency. (Chenhall, 2005) [5]

According to Shank and Govindarajan (1991) [9], tools

applied in SMA consist of life cycle cost, evaluation of value chain and cost of quality. Then. Guilding and his partner (2000) identified 11 SMA tools in research including; (1) Attribute costing, (2) Value chain, (3) Quality management, (4), Life- cycle costing, (5) Brand evaluation, (6) Pricing strategy, (7) Quality costing, (8) Competitor cost assessment, (9) Competitive effectiveness assessment, (10) Competitive Position Monitoring, (11) Target costing.

Cravens and his partner (2007) took over Guilding's achievement and added extra tools including ABC, Benchmarking, ABC and removed the Brand Evaluation tool to complete SMA with total of 13 tools.

Cinquini and Tenucci (2007) [6] identified total 14 tools by combining the 13 previous tools of Cravens and added one called Customer Profitability Analysis.

Cadez and Guilding (2008) [4] then identified 16 tools basing on 14 tools proposed by Cinquini and Tenucci (2007) [6] and added more 2 tools including Valuation of Customers as Assets and Life-cycle Customer Profitability Analysis.

According to a variety of tools claimed between 1991 and 2008, Cadez and Guilding (2008) [4] summarized and divided them into 5 main tools groups of SMA (table 1) which were then used by different authors to do research, for example: Shah and her partners (2011); Fowzia (2011); Ojra (2014); Michael and his partners (2017).

Table 1: Overview of research about Strategic Management Accounting Techniques

Group	Strategic Maangerial Accounting Techniques	Authors
Costing	Attribute Costing	Bromwich, 1990; Roslender & Hart, 2003
	Life-cycle Costing	Dunk, 2004; Shields & Young, 1991
	Quality Costing	Belohlav, 1993; Heagy, 1991
	Target Costing	Cooper & Slagmulder, 1999; Monden & Hamada, 1991
	Value Chain Costing	Shank & Govindarajan, 1992
Planning, control and performance measurement	Benchmarking	Elnathan <i>et al.</i> , 1996; Brownlie, 1999
	Performance Measurement	Chenhall, 2005 [5]; Kaplan & Norton, 1992, 1996
Strategic Management	Strategic Management Costing	Shank, 1996
	Pricing Strategy	Simmonds, 1982
	Brand Valuation	Guilding, 1992
Competitor Accounting	Competitor Cost Assessment	Bromwich, 1990; Jone, 1988; Ward, 1992
	Competitive Position Monitoring	Rangone, 1997; Simmonds, 1986
	Competitor Performance Evaluation	Moon & Bates, 1993
Customer Accounting	Customer Profitability Assessment	Bellis Jones, 1989; Ward, 1992
	Customer Long-term Value Assessment	Foster & Gupta, 1994
	Evaluation of Customers as Assets	Fosster, Gupta & Sjoblom, 1996; Zeithaml, 2000

Source: Compilation author

3. Research method

3.1 Research sample

The data used for surveys is collected through two methods: direct interview and online investigation (Google forms). Interviewers were authors and some collaborators who are lecturers recently teaching Accounting at universities. The questionnaire was prepared and then used in face-to-face conversations which allowed interviewers to immediately gather the answers. Besides, these questions were also listed in a Google form and sent through emails. Their main sources were from which were officially published in listed companies and whom graduated from accounting major. Businesses joining in surveys can choose one method which was suitable for them. Each enterprise only fills a sample that mainly aim to managers (from head/deputy department and above) and accountants.

3.2 Research models

asing on Uncertainty principle, Agency theory, Information

theory and results from previous research as well as taking over scales of different factors which were identified by the group of authors Doan Ngoc Phi Anh (2012), research models can be illustrated as the following chart.

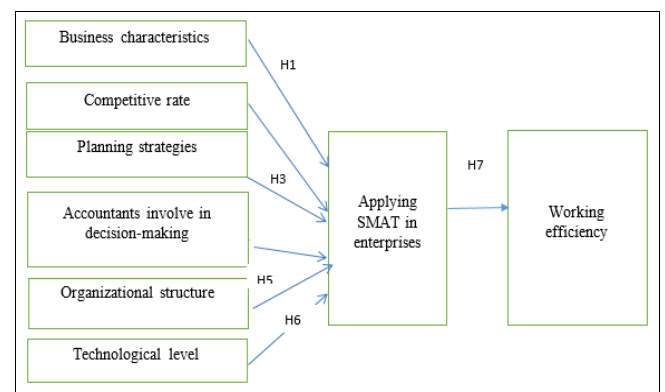


Fig 1: Research models

3.3 Factors scale in research models

These scales took over from previous research, however, to do implementation that can be suitable for the reality of research environment, authors took for advices of scientists to timely adjust. The following table will illustrate the system after discussing with scientists:

Table 2: Factors scales adjusted according to scientists' opinions

Symbol	Content
<i>DDDN: Business characteristics factor</i>	
DDDN1	The average number of employees
DDDN2	Charter capital
DDDN3	Total assets on balance sheet
<i>MDCT: Competitive rate factor</i>	
MDCT1	Businesses have to cope with pressure of fuel
MDCT2	Businesses have to cope with pressure of human resource
MDCT3	Businesses have to cope with pressure of sale and distribution
MDCT4	Businesses have to cope with pressure of product quality
MDCT5	Businesses have to cope with pressure of product diversity
MDCT6	Businesses have to cope with pressure of price
MDCT7	Businesses have to cope with pressure of other issues: being friendly with environment, production technology, etc.
<i>XDCL: Planning strategies factor</i>	
XDCL1	In businesses, strategies should be analyzed before turning them into actions
XDCL2	Creating business strategies helps enterprises recognize slow growth or changes in the business environment
XDCL3	Business strategies in enterprises are often randomly built to respond to fluctuations in the business environment.
<i>KTTG: Scale of accounting factors involved in decision making</i>	
KTTG1	Accountants involve in defining problems and objectives
KTTG2	Accountants involve in creating business plans
KTTG3	Accountants involve in the evaluation of business plans
KTTG4	Accountants involve in the detailed development of operational plans
KTTG5	Accountants take necessary actions to make suitable adjustment in the operation of enterprise
<i>CCTC: Organizational structure factor</i>	
CCTC1	Businesses have an organizational structure for developing new products
CCTC2	Businesses have an organizational structure for recruiting and dismissing employees
CCTC3	Businesses have an organizational structure for purchasing assets
CCTC4	Businesses have an organizational structure for price valuation
CCTC5	Businesses have an organizational structure for distributing products
<i>TDCN: Technological level factor</i>	
TDCN1	Technology is a key element in the operation system of enterprises.
TDCN2	Techniques in production in enterprises are always based on modern technology
TDCN3	The accounting information system is implemented on a computer using supporting accounting software
TDCN4	Businesses prioritize investment in software to support other functions (human resource management, administration, etc.)
<i>SMAT: Applying SMAT in enterprises</i>	
SMAT1	Businesses establish and operate a comprehensive quality management system
SMAT2	Businesses establish and operate a management system

	basing on activities.
SMAT3	Businesses use the balanced scorecard to comprehensively measure their performance
SMAT4	Accountants track the cost of a product type in each stage in its life cycle
SMAT5	Accountants collect cost separately for each activity in the value chain from the production stage to the delivery stage
SMAT6	Businesses carry out activities to transform materials into products that customers require to create extra value for customers
<i>HQHD: Working efficiency factor</i>	
HQHD1	Determine the business production cost of the product
HQHD2	Profit after company income tax
HQHD3	The number of employees that are satisfied with the business
HQHD4	The number of customers that are satisfied with the business
HQHD5	Products quality of the business
HQHD6	The number of new products made by the business
HQHD7	Market share of the business

Source: Compilation author

4. Results

4.1 Descriptive statistics of the research sample

The total number of survey questionnaires collected was 358 votes (google forms: 107, face-to-face interview: 251). After removing 37 interview questionnaires due to insufficient information, the required number of votes was sufficient to complete the survey. analysis is 321 votes. The surveyed enterprises are spread throughout the country, but the majority are headquartered in Ho Chi Minh City. Hanoi (215 enterprises, accounting for 66.9%). The respondents were mainly accountants (240 votes, accounting for 74.8%). Based on the survey results on the main business activities, the industry with the highest number of survey votes is wholesale and retail; repairing automobiles, motorcycles, motorbikes and other motor vehicles (117/321, accounting for 36.4%), ranked second is the processing and manufacturing industry (82/311, accounting for 25.5%).

Table 3: Descriptive statistics of the research sample by field of production and business activities

S. No	Industry	Total
1	Manufacturing industry	82
2	Construction industry	29
3	Wholesale and retail; repair of cars, motorcycles, motorbikes and other motor vehicles	117
4	Warehousing transportation	16
5	Real estate business	12
6	Professional, scientific and technological activities	19
7	Administrative activities and support services	16
8	Other industries	30
9	Total	321

Source: Data processing by the author's team

4.2 Results of the research

Results of the reliability analysis of scales

The research consists of 8 scales with 36 observed variables, the results of testing the reliability of the scale through Cronbach's Alpha coefficient shows that all scales meet the allowable requirements. Cronbach's Alpha coefficients are both > 0.6 and total correlation coefficient > 0.3. Therefore, all 36 observed variables for 8 scales are eligible to analyze the correlation coefficient between factors. Table 4 will show the reliability of the scales:

Table 4: Reliability of Cronbach’s Alpha scale

Symbol	Average scale without variables	Variance	Total Correlation	Cronbach’ Alpha
Business characteristics				
Cronbach’s Alpha				0,877
DDDN1	6,29	5,236	0,756	0,832
DDDN2	6,32	4,800	0,786	0,805
DDDN3	6,35	5,260	0,747	0,839
Competitive rate				
Cronbach’s Alpha				0,899
MDCT1	16,02	27,896	0,731	0,881
MDCT2	16,01	27,037	0,784	0,873
MDCT3	15,96	27,523	0,776	0,875
MDCT4	15,89	25,057	0,799	0,870
MDCT5	16,06	26,350	0,733	0,881
MDCT6	15,98	29,462	0,557	0,906
Planning strategies				
Cronbach’s Alpha				00,791
XDCL1	5,16	5,169	0,539	0,809
XDCL2	5,17	4,299	0,708	0,634
XDCL3	5,27	4,153	0,661	0,686
Accountants involve in decision-making				
Cronbach’s Alpha				0,851
KTTG 1	9,40	9,853	0,681	0,818
KTTG 2	9,41	8,768	0,702	0,806
KTTG 3	9,19	8,923	0,711	0,802
KTTG 4	9,53	8,737	0,681	0,817
Organizational structure				
Cronbach’s Alpha				0,834
CCTC 1	10,33	8,529	0,668	0,788
CCTC 2	10,40	7,859	0,695	0,775
CCTC 3	10,40	8,247	0,694	0,776
CCTC 4	10,36	8,548	0,600	0,818
Technological level				
Cronbach’s Alpha				0,871
TDCN1	9,85	10,242	0,702	0,847
TDCN2	9,94	9,112	0,733	0,832
TDCN3	9,79	9,026	0,722	0,837
TDCN4	9,88	9,077	0,752	0,824
Applying SMAT in enterprises				
Cronbach’s Alpha				0,874
SMAT1	17,18	22,899	0,654	0,858
SMAT2	17,32	19,863	0,746	0,840
SMAT3	17,28	20,704	0,668	0,854
SMAT4	17,51	22,013	0,582	0,868
SMAT5	17,41	21,161	0,684	0,851
SMAT6	17,30	20,485	0,742	0,841
Working efficiency				
Cronbach’s Alpha				0,895
HQHD1	17,24	24,913	0,746	0,874
HQHD2	17,35	22,352	0,814	0,861
HQHD3	17,28	23,026	0,763	0,870
HQHD4	17,09	24,216	0,687	0,882
HQHD5	17,11	24,732	0,711	0,878
HQHD6	17,24	25,428	0,602	0,895

Source: Data processing by the author’s team

4.3 Discuss the results of hypothesis testing

Similar to the results analysis system, it shows that in 7 hypothesis studies, 6 hypotheses are statistically significant, and only one hypothesis "Organizational structure affects the application of SMAT in enterprises" is not statistically significant.

The SMAT factor has a direct positive impact on the efficiency of prefix performance with the significance level is less than 5%. This result means that if businesses want to grow productivity, they must increase the application SMAT. On other words, enterprises need to use a

combination of various SMAT techniques and methods to have more information for decision making.

Table 5: Summary of research hypothesis testing results

Hypothesis	Relationship between		Correlation Coefficient	Level of significant Sig. (2 tailed)	Conclusion
	Independent variable	Dependent variable			
H1	Business characteristics	SMAT	+ 0.178	0.001	Accept
H2	Competitive rate	SMAT	+ 0.272	0.000	Accept
H3	Planning strategies	SMAT	+ 0.190	0.002	Accept
H4	Accountants involve in decision-making	SMAT	+ 0.186	0.000	Accept
H5	Organizational structure	SMAT		0.07	Reject
H6	Technological level	SMAT	+ 0.156	0.001	Accept
H7	Applying SMAT	HQHD	+ 0.239	0.04	Accept

Source: Data processing by the author’s team

In addition, according to the influence relationship of 5 independent variables to SMAT dependent variable, the impact level of the factors is arranged in descending order as follows: Competitive level (+ 0.272); CLKD build (+0.190); Accountants participate in decision making (+ 0.186); Enterprise characteristics (+ 0.178); Technology (+ 0.156).

5. Conclusion

The application of SMAT is very necessary for all businesses in maintaining and developing sustainably in today’s complex and rapidly changing competitive environment, helping companies achieve their strategic goals, thereby ensuring the existence, success and growth of companies in the market. Besides the benefits that SMAT brings, there are many limitations and difficulties when enterprises apply these techniques. The research was conducted to test the influence of contingency theory variables (competitive rate, business characteristics, technological level, planning strategies) and agency theory variables (the participation of accountants in strategic decisions and organizational structure) to the variables of information processing theory (application of SMAT, working efficiency) in Vietnamese enterprises and empirically examines the influence of SMAT application on the business relationship of enterprises which base on the theory of information behavior.

The findings of the research shows that there is a positive relationship among the variables of competitive rate, business characteristics, technological level, planning strategies, the participation of accountants in strategic decisions and application SMAT as well as the positive impact between the application of SMAT to the operating system of enterprises. Only organizational structure does not affect the application of SMA. This article helps managers realize the importance of applying SMAT in enterprises to increase competitiveness, thereby improving the operational efficiency of enterprises and sustainable development.

6. References

1. Abdel Kader, Luther. A survey of management

- accounting practices in the UK food and drinks industry. *British Food Journal*. 2006; 108.
2. Bromwich M. The case for strategic management accounting: The role of accounting information for strategy in competitive markets* 1. *Accounting, Organizations and Society*. 1990; 15(1-2):27-46.
 3. Bromwich M, Bhimani A. *Management accounting: Pathways to progress*: Chartered institute of management accountants, London, 1994.
 4. Cadez S, Guilding C. An exploratory investigation of an integrated contingency model of strategic management accounting. *Accounting, Organizations and Society*. 2008; 33(7-8):836-863.
 5. Chenhall RH. Integrative strategic performance measurement systems, strategic alignment of manufacturing, learning and strategic outcomes: An exploratory study. *Accounting, organizations and society*. 2005; 30(5):395-422.
 6. Cinquini L, Tennuci A. Is the adoption of Strategic Management Accounting techniques really “strategy-driven”? Evidence from a survey. *MPRA*. 2007; 11819:1-29.
 7. Cravens KS, Guilding C. An empirical study of the application of strategic management accounting techniques. *Advances in Management Accounting*. 2001; 10:95-124.
 8. Guilding C, Cravens KS, Tayles M. An international comparison of strategic management accounting practices. *Management Accounting Research*. 2000; 11(1):113-135.
 9. Shank JK, Govindarajan V. Strategic cost management and the value chain. *The Handbook of Cost Management Accounting*, B. Brinker, ed., New York: Warren, Gorham and Lamont, 1991.
 10. Simons R. Accounting control systems and business strategy: An empirical analysis. *Accounting, Organizations and Society*. 1987; 12(4):357-374.
 11. Simons R. The role of management control systems in creating competitive advantage: New perspectives. *Accounting, Organizations and Society*. 1990; 15(1-2):127-143.
 12. Yek TM. *Quality and performance management of technical education and training in Singapore*, 2007.